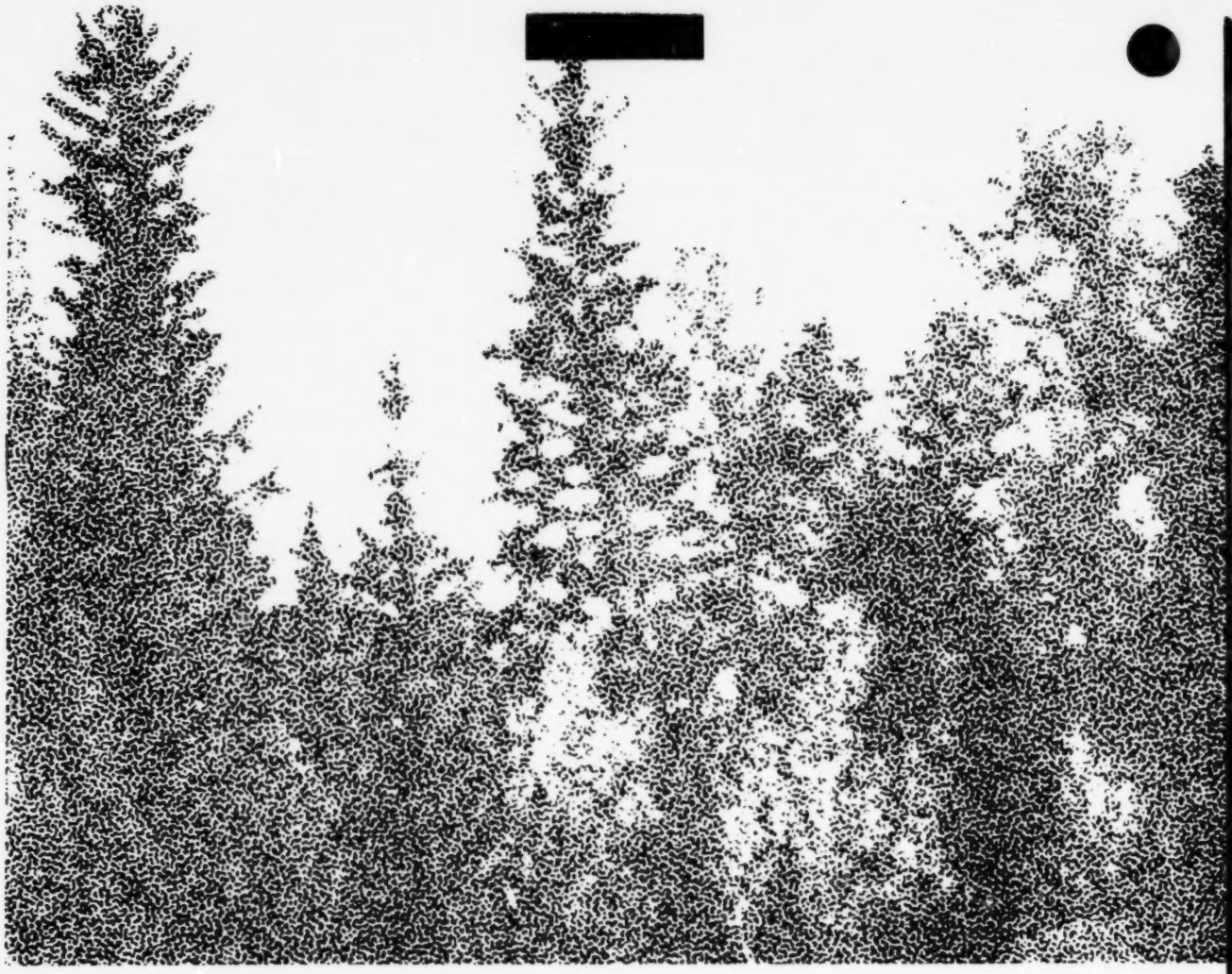


HIGH LEVEL
FORT VERMILION

TIMBER DEVELOPMENT AREA

Alberta

HIGH LEVEL
FORT VERMILION

TIMBER DEVELOPMENT AREA

THE FOREST RESOURCE

Alberta's reserves constitute the largest supply of coniferous and deciduous timber available in North America. This Timber Development Area (TDA) is one of Alberta's best aspen-spruce mixedwood development opportunities. Because areas similar to the High Level/Fort Vermilion TDA have already been developed, Alberta has become a dynamic force in the forest industry in Canada, and around the world. The predominant species in the TDA area is trembling aspen (Populus tremuloides), followed by white spruce (Picea glauca). The aspen is found in pure stands and in mixedwood stands where it is associated with white spruce and to a lesser extent pine. This species combination is suitable for production of high quality pulp, newsprint or other related products.

High Level/Fort Vermilion Timber Development Area Resource Overview

Deciduous Annual Allowable Cut	931,600 cubic meters (217,063,000 board feet)
Coniferous Annual Allowable Cut	497,700 cubic meters (115,964,000 board feet)
Total Annual Allowable Cut	1,429,300 cubic meters (333,027,000 board feet)
Gross Area	4,776,229 hectares (11,797,286 acres)

QUALITY OF RESOURCE

The High Level/Fort Vermilion Timber Development Area is located in north western Alberta, approximately 734 kilometers (460 miles) north west of Edmonton. The total area of the TDA is 4,776,229 hectares (11,797,286 acres), and can be broken down by productivity class as follows:

Productive	2,755,666 hectares (6,806,495 acres)
Potentially Productive	267,638 hectares (661,066 acres)
Non-productive	1,752,925 hectares (4,329,725 acres)

The forest cover in the TDA is a combination of hardwoods and softwoods. Trembling aspen (Populus tremuloides) and white spruce 'Picea glauca) predominate. The trembling aspen and coniferous volume in the area is 38 million cubic meters (8.9 billion board feet) and 36 million cubic meters (8.4 billion board feet) respectively.

Growth rates in aspen range up to 2.41 cubic meters/hectare/year (228 board feet/acre/year) at 90 years of age. In mature and overmature stands, likely to be harvested over the next 20 years, the approximate average aspen tree size is 22.6 meters (74.1 feet) in height, and 25.5 centimeters (10.0 inches) in diameter at breast height. The average volume per aspen tree is 0.44 cubic meters (103 board feet - "Alberta log rule").

Growth rates in coniferous stands range up to 2.43 cubic meters/hectare/year (229 board feet/acre/year) at maturity; little reduction in growth rate is evident in overmature stands. In stands ready to harvest over the next twenty years, average coniferous tree size is 23.4 meters (76.8 feet) in height, and 26.5 centimeters (10.4 inches) in diameter at breast height. Average volume per tree is 0.49 cubic meters (114 board feet - "Alberta log rule").

For deciduous stands at or near maturity, advanced decay percentages range from 2.0 to 10.0 percent, increasing with stand height. The amount of decay present is highly variable and is influenced by a number of factors including site quality, tree growth, genetic constitution, stand density and age. For deciduous stands a high decay and subsequent mortality occurs after 100 years of age, with most stands having little or no merchantable deciduous volume at 180 years.

For coniferous stands at or near maturity, advanced decay percentages are remarkably low, particularly in slower growing stands. Even older stands are virtually defect free.

CULL PERCENTAGE
(FOR PULP UTILIZATION)

- for stands likely to be harvested over the next 20 years

HEIGHT		CULL (as a percent of gross volume*)	
METERS	FEET	Coniferous	Deciduous
12 - 17	40 - 59	1.4	2.0
18 - 23	60 - 79	2.1	4.0
24 - 29	80 - 99	5.3	10.0

* 15 centimeters (6 inch) stump diameter and greater.

WOOD SUPPLY

The deciduous annual allowable cut is from the pure deciduous stands within the TDA. The coniferous annual allowable cut is available from the pure coniferous and the merchantable mixedwood stands within the conifer roundwood supply area.

In addition to the supply of roundwood in the Timber Development Area there is a significant supply of aspen on private lands and Metis Settlements adjacent to the TDA. The developer of the TDA would be able to obtain this additional wood supply through purchase agreements with the Metis colonies and private land owners.

CONIFEROUS WOOD SUPPLY -
from the conifer roundwood supply area

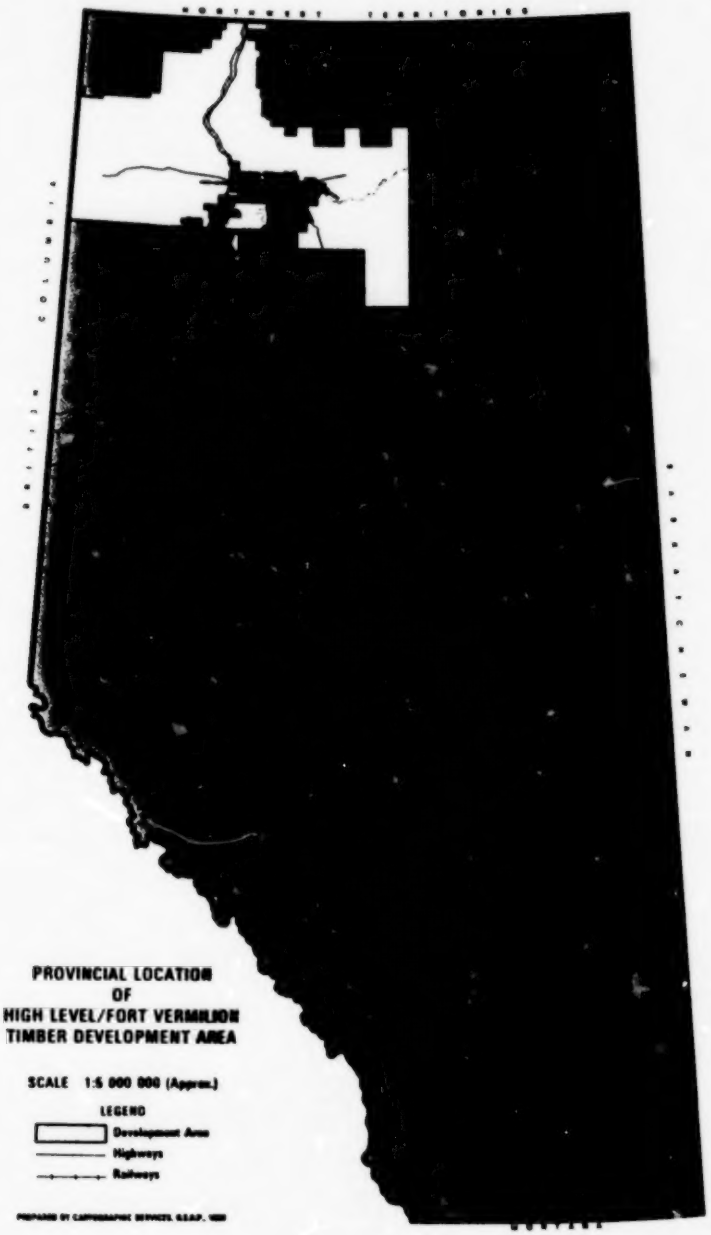
Annual Allowable Cut	Committed	Uncommitted
516,800 cubic meters (120,414,000 board feet)	19,100 cubic meters (4,450,000 board feet)	497,700 cubic meters (115,964,000 board feet)

DECIDUOUS WOOD SUPPLY -
from the entire TDA

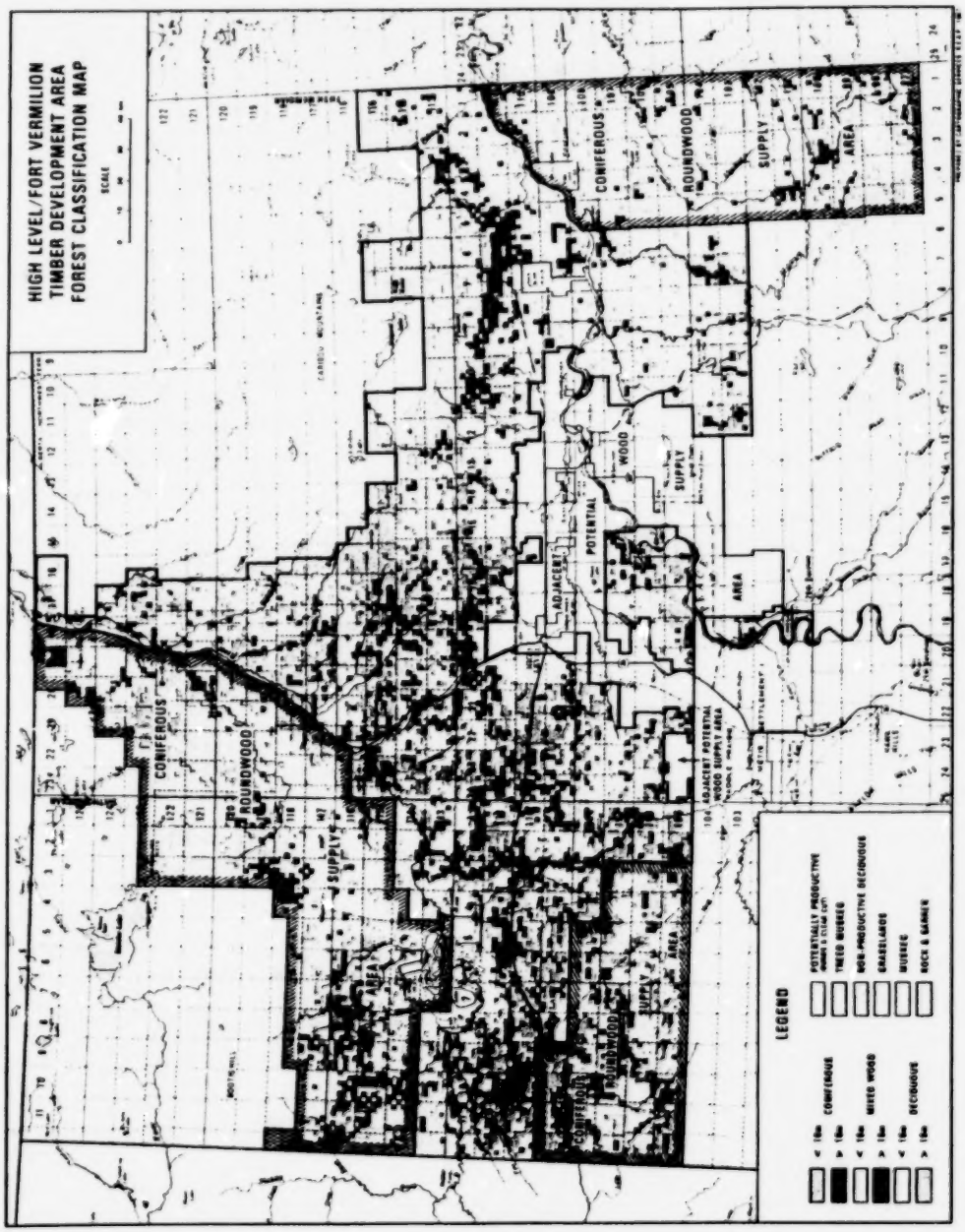
Annual Allowable Cut	Committed	Uncommitted
931,600 cubic meters (217,063,000 board feet)	0 cubic meters	931,600 cubic meters (217,063,000 board feet)

Total wood supply available annually 1,429,300 cubic meters

TDA LOCATION

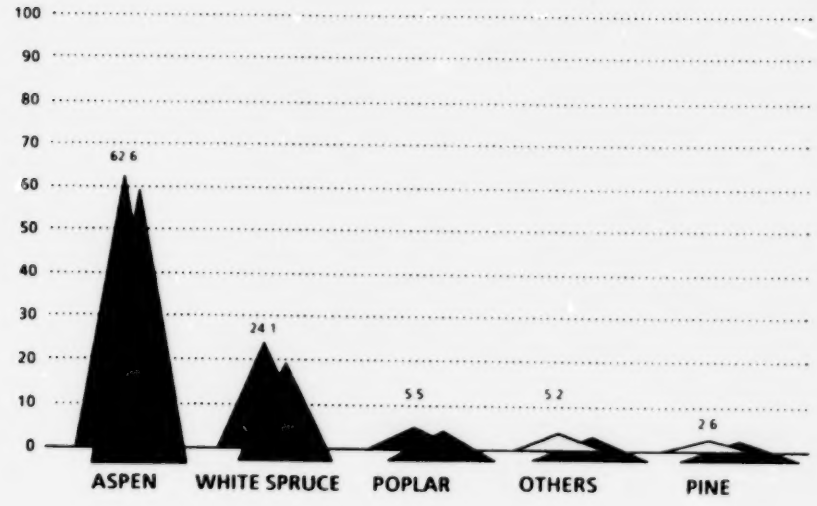


CLASSIFICATION MAP

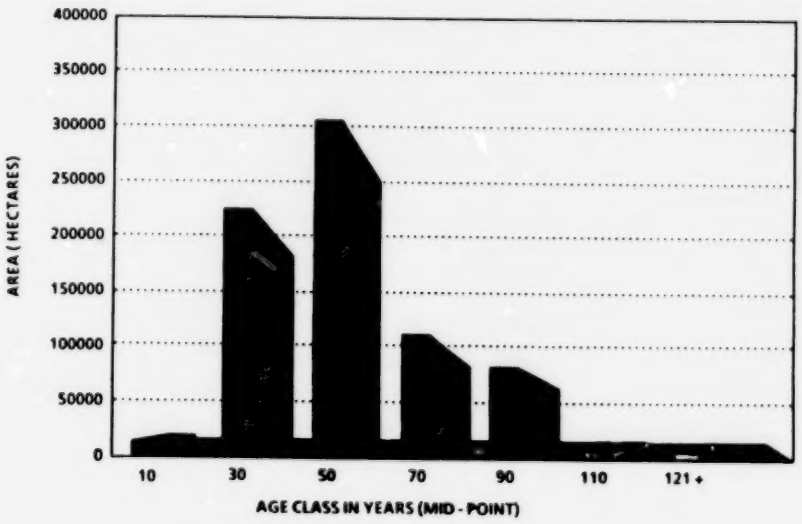


DECIDUOUS LAND BASE

PERCENT VOLUME BY SPECIES
HIGH LEVEL/FORT VERMILION TDA



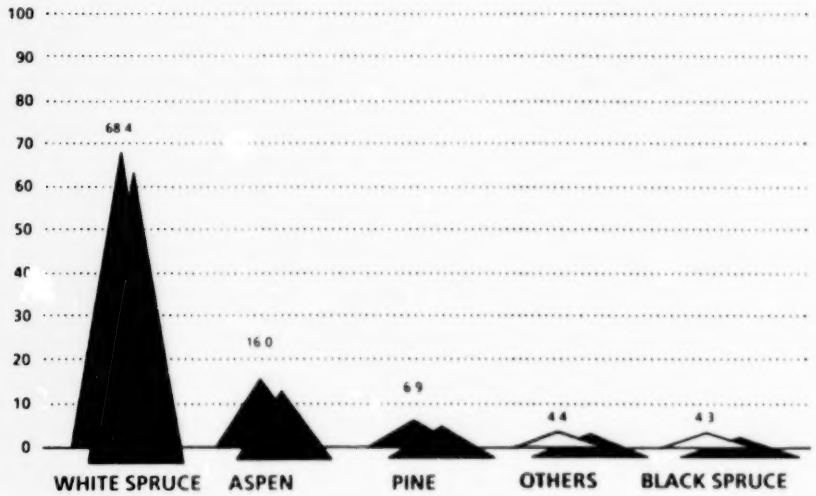
AREA BY AGE CLASS
HIGH LEVEL/FORT VERMILION TDA



CONIFEROUS LAND BASE

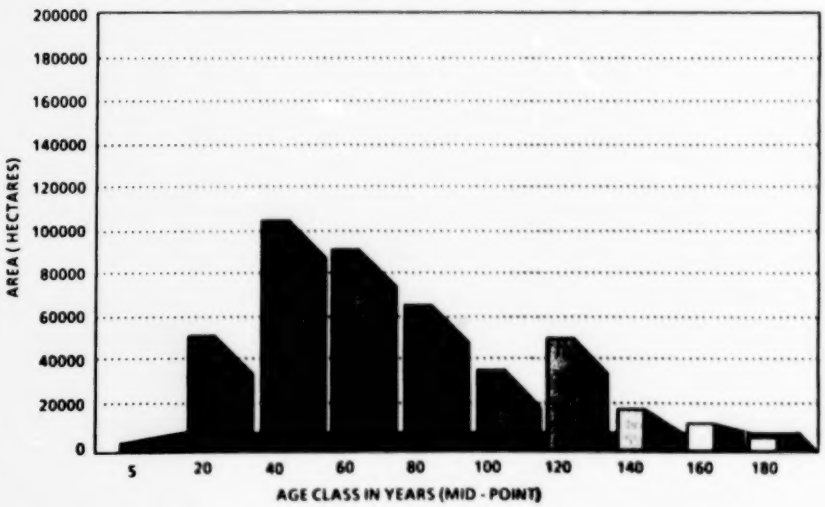
PERCENT VOLUME BY SPECIES

HIGH LEVEL/FORT VERMILION TDA



AREA BY AGE CLASS

HIGH LEVEL/FORT VERMILION TDA



PROVINCIAL FULLY STOCKED YIELD TABLES
WHITE SPRUCE MEDIUM SITE

Utilization Standards: Minimum Stump Diameter - 15 cm (6 inch)
Minimum Top Diameter (inside bark) - 10 cm (4 inch)

TOTAL AGE (YR)	TOP HEIGHT (M)	TOP HEIGHT (FT)	GROSS VOLUME (CU M/HA)	GROSS VOLUME (MFBM/AC)	GROSS MAI (CU M/HA/YR)	GROSS VOLUME (FBM/AC/YR)	NO. OF TREES (PER HA)	NO. OF TREES (PER AC)
10	0.0	0	0.0	0.0	0.0	0.0	0	0
20	1.8	6	0.0	0.0	0.0	0.0	0	0
30	4.6	15	0.0	0.0	0.0	0.0	0	0
40	7.6	25	0.0	0.0	0.0	0.0	0	0
50	10.6	35	1.6	0.2	0.03	3.1	35	8
60	13.4	44	50.6	4.8	0.84	79.5	404	93
70	15.9	52	97.8	9.2	1.40	131.7	537	123
80	18.2	60	141.9	13.4	1.77	167.3	597	137
90	20.3	66	182.5	17.2	2.03	191.2	622	143
100	22.1	72	219.2	20.7	2.19	206.8	629	144
110	23.7	78	252.2	23.8	2.29	216.3	627	144
120	25.1	82	281.8	26.6	2.35	221.5	620	142
130	26.3	86	308.1	29.1	2.37	223.6	611	140
140	27.5	90	331.6	31.3	2.37	223.4	601	138
150	28.5	93	352.6	33.3	2.35	221.7	590	135
160	29.4	96	371.3	35.0	2.32	218.9	580	133
170	30.2	99	388.1	36.6	2.28	215.4	571	131
180	30.9	101	403.2	38.0	2.24	211.3	562	129

CM	- CENTIMETERS	CU M/HA/YR	- CUBIC METERS/HECTARE/YEAR
YR	- YEARS	MAI	- MEAN ANNUAL INCREMENT
M	- METERS	FBM/AC/YR	- BOARD FEET/ACRE/YEAR
FT	- FEET	HA	- HECTARE
CU M/HA	- CUBIC METERS/HECTARE	AC	- ACRE

PROVINCIAL FULLY STOCKED YIELD TABLES
HARDWOODS MEDIUM SITE

Utilization Standards: Minimum Stump Diameter - 15 centimeters (6 inch)
Minimum Top Diameter (inside bark) - 10 centimeters (4 inch)

TOTAL AGE (YR)	TOP HEIGHT (M)	TOP HEIGHT (FT)	GROSS VOLUME (CU M/HA)	GROSS VOLUME (MFBM/AC)	GROSS MAI (CU M/HA/YR)	GROSS VOLUME (FBM/AC/YR)	NO. OF TREES (PER HA)	NO. OF TREES (PER AC)
10	4.2	13.7	0.0	0.0	0.0	0.0	0	0
20	9.0	29.4	0.0	0.0	0.0	0.0	0	0
30	12.7	41.5	0.0	0.0	0.0	0.0	0	0
40	15.5	50.8	7.8	0.7	0.19	18.3	138	56
50	17.7	58.1	70.0	6.6	1.40	131.9	544	220
60	19.5	63.8	119.3	11.3	1.99	187.5	617	250
70	20.9	68.4	158.8	15.0	2.27	214.0	615	249
80	22.0	72.1	190.9	18.0	2.39	225.0	592	240
90	22.9	75.3	217.1	20.5	2.41	227.5	565	229
100	23.7	77.9	238.9	22.5	2.39	225.3	540	219

CM	- CENTIMETERS	CU M/HA/YR	- CUBIC METERS/HECTARE/YEAR
YR	- YEARS	MAI	- MEAN ANNUAL INCREMENT
M	- METERS	FBM/AC/YR	- BOARD FEET/ACRE/YEAR
FT	- FEET	HA	- HECTARE
CU M/HA	- CUBIC METERS/HECTARE	AC	- ACRE

STAND/STOCK TABLE
MATURE LAND BASE

Utilization Standards: Minimum Stump Diameter - 15 cm (6 inch)
Minimum Top Diameter (inside bark) - 10 cm (4 inch)

DBH (CM)	DBH (INCH)	NS/HA	NS/ACRE	GROSS VOLUME (CU M/HA)	GROSS VOLUME (FBM/AC)
12	4.7	69	28	NIL	NIL
14	5.5	67	27	2	189
16	6.3	70	28	6	566
18	7.1	61	25	8	755
20	7.9	60	24	12	1,132
22	8.7	56	23	15	1,415
24	9.4	50	20	17	1,604
26	10.2	45	18	19	1,792
28	11.0	37	15	20	1,887
30	11.8	32	13	20	1,887
32	12.6	24	10	18	1,698
34	13.4	19	8	17	1,604
36	14.2	14	6	13	1,226
38	15.0	10	4	12	1,132
40	15.7	8	3	10	943
42	16.5	6	2	8	755
44	17.3	4	2	7	660
46	18.1	3	1	5	472
48	18.9	2	1	4	377
50	19.7	2	1	3	283
52	20.5	1	0	2	189
54	21.3	1	0	2	189

AVERAGE DBH	22.4 centimeters
AVERAGE HEIGHT	22.3 meters
GROSS VOLUME/TREE	0.339 cubic meters
CULL %	3.91

CM	- CENTIMETERS	HA	- HECTARE
DBH	- DIAMETER BREAST HEIGHT	CU M/HA	- CUBIC METERS/HECTARE
NS	- NUMBER OF STEMS	FBM/AC	- BOARD FEET/ACRE

COMMUNITY PROFILE - HIGH LEVEL

The town of High Level is strategically located within the Timber Development Area. High Level has a positive attitude towards economic development and it is in a position to offer a full array of municipal services. The economic base of High Level is derived from oil and gas, timber and agriculture. A profile of the community is given below:

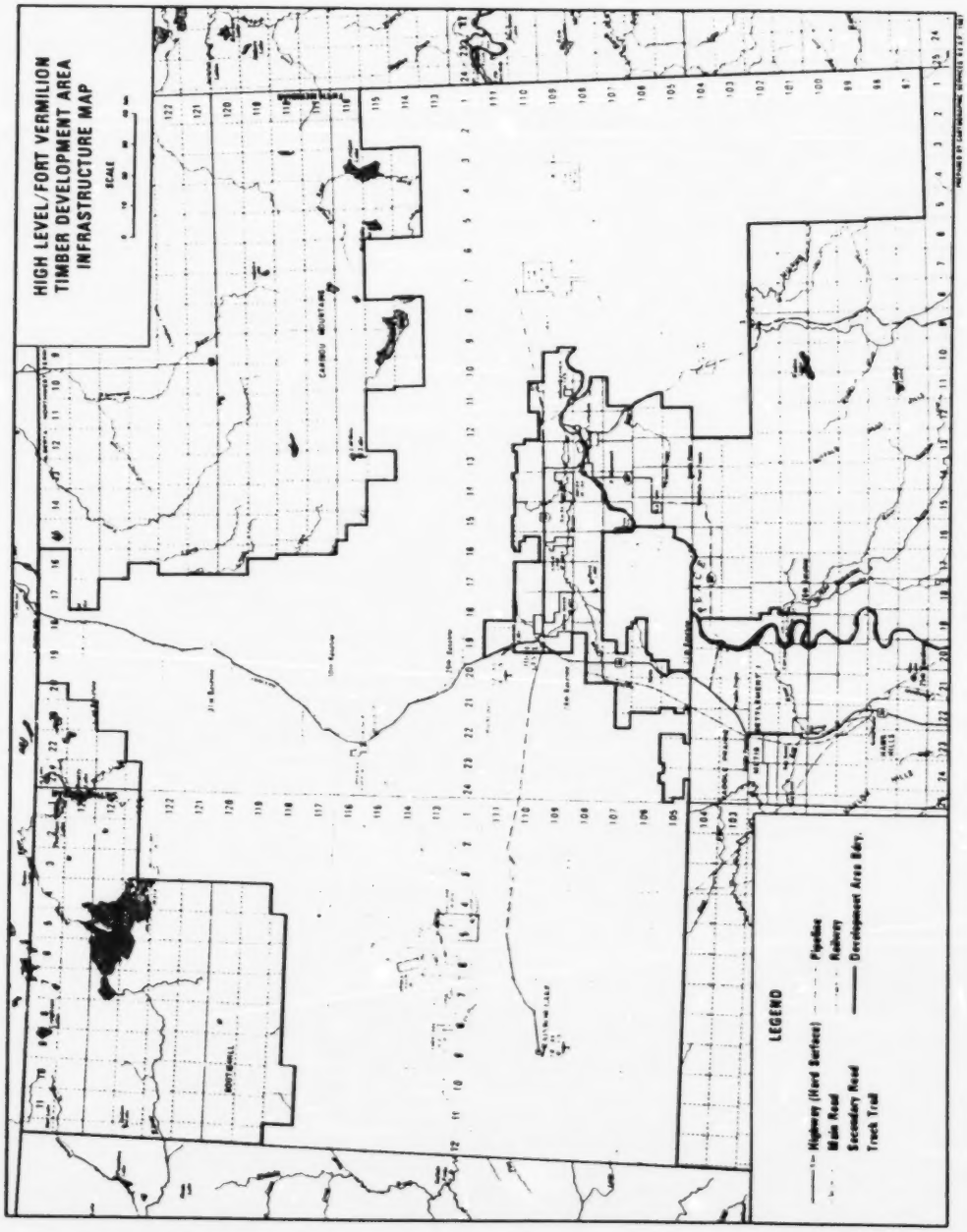
POPULATION		2,852
LABOUR FORCE	- male	685
	- female	540
	- a number of independent logging contractors, with considerable woods operation experience, are located in High Level.	
DISTANCE FROM MAJOR CENTRES		734 kilometers (460 miles) northwest of Edmonton
		296 kilometers (184 miles) north of Peace River
CONNECTING HIGHWAY		#35, high standard, paved.
RAILWAY		Great Slave Railway
AIRPORT - longest runway		1,524 meters (5,000 feet) paved surface, night operation
ELEVATION		332 meters (1,090 feet)
TEMPERATURE - seasonal averages		winter -24.6° centigrade (-12.3°F) summer +15.7° centigrade (+60.3°F)
ANNUAL PRECIPITATION - rain		257.9 millimeters (10.1 inches)
- snow		163.6 centimeters (64.4 inches)
- total		386.7 millimeters (15.2 inches)
FROST FREE DAYS		71
ELECTRICAL POWER - industrial rates		Alberta Power Ltd. $7.05 - $13.85 per month per kilowatt (depending on demand) plus $0.012 - $0.017 per kilowatt-hour energy charge. Rebates are available which may amount to as much as a 35% reduction in these rates.
NATURAL GAS - industrial rates		I.C.G. (Plains Western) $7.50 - $200.00 per month fixed charge plus $2.65 -$2.85 per thousand cubic feet. The rates vary according to consumption.
MILL RATE - industrial		$38.24/$1000 assessed tax value
- residential		$30.00/$1000 assessed tax value
PER CAPITA DEBT		$1,457
MEDICAL		1 Hospital (25 beds) 5 Doctors 4 Dentists (mobile clinic)
EDUCATION		1 Kindergarten 1 Elementary (Grades 1 - 6) 1 Junior High (Grades 7 - 9) 1 High School (Grades 10 - 12) (all within the same school)
RECREATION		Swimming, Skating, Golf, Tennis, Hunting, Camping, Race track, Curling, Fishing

COMMUNITY PROFILE - FORT VERMILION

The town of Fort Vermilion is favourably located within the Timber Development Area. Fort Vermilion's positive attitude and available infrastructure provide the necessary ingredients for economic development. The economic base of Fort Vermilion is derived from agriculture and timber.

POPULATION	775
LABOUR FORCE	Not available at this time
DISTANCE FROM MAJOR CENTRES	800 kilometers (497 miles) northwest of Edmonton 80 kilometers (50 miles) east of High Level
CONNECTING HIGHWAYS	#58, high standard, paved. #67, high standard, paved
RAILWAY	(Great Slave Railway at High Level)
AIRPORT - longest runway	915 meters (3,000 feet)
WATER - major river - Peace River	Flow rate 8,500 cubic metres/second (300,217 cubic feet/second) average from May to October
ELEVATION	278 meters (915 feet)
TEMPERATURE - seasonal averages	winter -23° centigrade (-10.8°F) summer 16.5° centigrade (61.7°F)
ANNUAL PRECIPITATION - rain - snow - total	256.1 millimeters (10.1 inches) 130.3 centimeters (51.3 inches) 382.5 millimeters (15.1 inches)
FROST FREE DAYS	97
ELECTRICAL POWER - industrial rates	Alberta Power Ltd. $7.05 - $13.85 per month per kilowatt depending on demand plus $0.012 - $0.017 per kilowatt-hour energy charge. Rebates are available which may amount to as much as a 35% reduction in these rates.
NATURAL GAS - industrial rates	Northern Lights Gas Co-op Ltd. $3.25/gigajoule per month plus $5.00 service charge per month. The rates indicated are approximate guidelines. Each application is dealt with on an individual basis as rates vary with consumption and seasonal demand requirements.
MILL RATE	not available at this time
MEDICAL	1 Hospital (36 beds) 3 Doctors 1 Dentist (twice weekly)
EDUCATION	2 Elementary (Grades 1 - 6) 2 Junior High (Grades 7 - 9)
RECREATION	Skating, Fishing, Baseball, Curling, Hunting, Boating, Camping

INFRASTRUCTURE MAP



CONTACTS

To assist prospective applicants in preparing their proposal for the High Level/Fort Vermilion Timber Development Area, a list of contact persons with Alberta Forestry, Lands and Wildlife is included.

Department	Contact Person
Alberta Forestry, Lands and Wildlife 9915 - 108 Street Edmonton, Alberta T5K 2C9	Mr. F.W. McDougall Deputy Minister Forestry, Lands and Wildlife (403) 427-3552 Mr. C.B. Smith Assistant Deputy Minister Alberta Forest Service (403) 427-3542

Also, in order to meet the growing demands of the forest industry the Forest Industry Development Division was organized within the Department of Forestry, Lands and Wildlife. The role of this new division is to assist new and existing forest companies and private investors to upgrade and utilize Alberta's vast uncommitted forest resources for a variety of forest products. The division is made up of people that can offer expertise in all aspects of forestry.

Mr. J.A. Brennan
Executive Officer
Forestry, Lands and Wildlife
Forest Industry Development Division
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(403) 422-7011